No. 7100041

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IS SUCH CASES MADE AND PROVIDED HAVE BEES COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTIOS UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLXNT VARIETY PROTECTION Is TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF seventeen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF TFIE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED By LAW, THE RIGHT To EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VA RIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BEAN

'Eagle'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 12th day of August in the year of our Lord one thousand nine hundred and seventy-four.

Attest:

L. R. Rollin

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Earl L. Butz

Secretary of Agriculture

Exhibit A Origin and Breeding History of the Variety

Bean Eagle PV#7141

Eagle originated from a cross made in 1962 between Roundup and Bush Blue Lake 274. The F1 and F2 generations were grown in the greenhouse in 1963. In 1964, 1965, and 1966 it was saved as single plant selections in segregating material, advancing through F3, F4, and F5. In 1967 it was placed in an evaluation trial where it performed well enough to warrant further seed increase and evaluation. In 1968 seed was increased, an evaluation trial was conducted and the experimental designation XP B13 was assigned. In 1969 and 1970 further trials were conducted and seed stock was further increased. XP B13 was named Eagle in 1970.

Eagle has been uniform and stable since 1968. It appears to have an above average tendency to flat pods, requiring a more rigid maintenance schedule than with some varieties. Its mutation rate to strings appears to be normal. No other off-types are known to occur at a significant level.

FORM GR-470 (2-1-71)

UNITED STATES DEPARTMENT OF AGRICULTURE
CONSUMER AND MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

FORM APPROVED OMB. NO.

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1. VARIETY NAME OR TEMPORARY DESIGNATION	2. KIND NAME	FOR OFFICIAL USE ONLY	
EAGLE	GARDEN BEAN	PVPO NUMBER 2141	
3. GENUS AND SPECIES NAME	4. FAMILY NAME	FILING DATE	TIME A.M. P.M.
PHASEOLUS VULGARIS	LEGUMINOSAE	3/17/71	6
	5. DATE OF DETERMINATION	FEE RECEIVED	CHARGES
	1967	$ 35	

6. NAME OF APPLICANT(S)	7. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)	8. TELEPHONE AREA CODE AND NUMBER
ASGROW SEED COMPANY	~~P. O. Box 725~~ ~~Orange, Connecticut 06477~~ 9620-190-1 KALAMAZOO, MICHIGAN 49001 RJS	~~Area Code 203~~ ~~795-3571~~ (616) 382-4000 RJS

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.)	10. STATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Delaware	March 22, 1968

12. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- [X] 12A. Exhibit A, Origin and Breeding History of the Variety (See *Section 52, P.L. 91-577*)
- [X] 12B. Exhibit B, Botanical Description of the Variety
- [X] 12C. Exhibit C, Objective Description of the Variety
- [X] 12D. Exhibit D, Particulars of Trial Performance
- [X] 12E. Exhibit E, Statement of the Basis of Applicant's Ownership

The applicant declares that a viable sample of basic seed that is planted to produce the variety commercially will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable. *(See Section 52, P.L. 91-577).*

13A. Does the applicant(s) specify that seed of this variety be sold by variety *name* only as a class of certified seed? *(See Section 142, P.L. 91-577) (If "Yes," answer 13b and 13c below.)* [ ] YES [XX] NO

13B. Does the applicant(s) specify that this variety be limited as to number of generations?	13C. If "Yes" to 13B, how many generations of production beyond breeder seed?
[ ] YES [X] NO	

14. Same and mailing address of applicant representative(s), if any, to serve in this application and receive all papers:

~~John A. Batcha~~
~~Asgrow Seed Company~~
~~P. O. Box 725~~
~~Orange, Connecticut 06477~~

Dr. Allen R. Frazier
9625-190-1
ASGROW SEED COMPANY
KALAMAZOO, MICHIGAN 49001

Applicant is informed that false representation herein can jeopardize protection and result in penalties.

The undersigned applicant(s) of this sexually-reproduced novel plant variety believes that the variety is entitled to protection under the provisions of Section 42 and is distinct, uniform, and stable as required in Section 41 of the Plant Variety Protection Act (P.L. 91-577).

ASGROW SEED COMPANY

3/3/71
(DATE)

by: John A. Batcha
(SIGNATURE OF APPLICANT)

John A. Batcha, Assistant to the President

(DATE)

(SIGNATURE OF APPLICANT)

Exhibit B Botanical Description of the Variety

Bean Eagle PV#7141

Eagle is a green podded snapbean which is adapted for use in most areas. It is adapted to both processing and fresh market use and to mechanical harvesting. It is in main crop season, reaching market maturity in about 75 days or about the same maturity as Bush Blue Lake to slightly earlier.

The plant is determinate, erect and tall with a compact branching habit. The plant is generally wirey and stout. Flowers and pods are borne high with a concentrated set.

Leaves are wrinkled, dull and medium green, and of average or medium thickness but generally large. They are taper pointed and slightly pubescent.

Flowers are white and are produced on medium length racemes.

Pods are medium green color, dull, and smooth. Pods average about 15 cms long, 89 mm wide, and 94 mm thick with a W/T ratio of 95. In cross section the pods are round becoming somewhat creasebacked with age. Pods are slightly curved, slightly or not constricted and sparsely pubescent. The spur is of medium size and slightly curved. The internal pod color is relatively light but firm, retaining this firmness well. Seed development is slow. Pods are stringless and low in fiber. Pods average about 6-7 seed. Seed are white and shiny and free from mottling or splashing. Hilar ring not present. There is a vein-like undercoat pattern. Seed average about 100 per ounce. They are kidney type, elliptical and round in cross section. They are about 13 mm long, 6 mm wide, and 6 mm thick with a W/T ratio of 100.

Eagle is resistant to common and NY 15 bean mosaic viruses. It is particularly sensitive to brown spot caused by Pseudomonas syringae.

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-12
(11-15-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Bean)

OBJECTIVE DESCRIPTION OF VARIETY BEAN (*PHALEOLUS VULGARIS*)

AMENDED (SEE LETTER OF 8/31/73 FROM ASGROW)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)
Asgrow Seed Company

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
9620-190-1
Kalamazoo, Michigan 49001

FOR OFFICIAL USE ONLY

PVPO NUMBER
7141

VARIETY NAME OR TEMPORARY DESIGNATION
Eagle

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. TYPE:

[1] 1 = SNAPBEAN 2 = GREEN SHELL 3 = DRY EDIBLE 4 = MULTIPURPOSE

2. SEASON AND REGION OF ADAPTABILITY IN THE U.S.:

[2] Grows best during: 1 = SPRING 2 = SUMMER 3 = FALL 4 = WINTER

[6] Best adapted in: 1 = NORTHWEST 2 = NORTHCENTRAL 3 = NORTHEAST 4 = SOUTHEAST 5 = SOUTHWEST 6 = MOST REGIONS

3. MATURITY (*Days from seeding to first harvest*):

[7][1] GREEN PODS [ ][ ] GREEN SHELLS [ ][ ] DRY SEEDS

[0][2] NO. DAYS EARLIER THAN ---------- [7]
[ ][ ] NO. DAYS LATER THAN ---------- [ ]

1 = TENDERCROP 2 = KENTUCKY WONDER 3 = KINGHORN WAX
4 = WHITE KIDNEY 5 = MICHELITE 62 6 = DWARF HORTICULTURAL
7 = BUSH BLUE LAKE 8 = OTHER (*Specify*)

4. PLANT:

[1] 1 = DETERMINATE, ERECT BUSH 2 = DETERMINATE, SPRAWLING BUSH 3 = DETERMINATE, SEMIPOLE 4 = INDETERMINATE, POLE

[0][5][3] CM. HEIGHT OR LENGTH OF VINE FROM PRIMARY LEAF NODE

[0][0][5] NUMBER PRIMARY BRANCHES PER MAIN STALK

[5][6] CM. SPREAD

[1] Branching habit: 1 = COMPACT 2 = OPEN

[0][4] NUMBER INTERNODES ON MAIN STALK BETWEEN PRIMARY LEAF AND BASE OF TERMINAL INFLORESCENCE

[0][2] CM. LENGTH OF FIRST INTERNODE ABOVE PRIMARY LEAF

[0][8] MM. STALK DIAMETER ABOVE FIRST TRIFOLIATE LEAF

[2] Main stalk: 1 = BRITTLE 2 = WIREY [1] 1. STOUT 2. THIN

[2] Flower position:
[2] Pod Position:
1 = LOW, CONCENTRATED 2 = HIGH, CONCENTRATED 3 = SCATTERED

5. LEAVES:

[2] 1 = SMOOTH 2 = WRINKLED [1] 1 = DULL 2 = GLOSSY [2] Thickness: 1 = THIN 2 = MEDIUM 3 = THICK

[3] Size: 1 = SMALL (*Earliwax*) 2 = MEDIUM 3 = LARGE (*Tendercrop*) [10] CM. PETIOLE LENGTH (*To basal leaflets of first trifoliate leaf*)

[2] Tip shape of center leaflet: 1 = ROUNDED 2 = TAPER POINTED 3 = SHARP POINTED

[2] PUBESCENCE - Dorsal:
[2] PUBESCENCE - Ventral:
1 = NONE 2 = SLIGHT 3 = CONSIDERABLE

[2] Color: 1 = LIGHT GREEN (*Bountiful*) 2 = MEDIUM GREEN 3 = DARK GREEN (*Bush Blue Lake*)

6. FLOWERS:

[1] Color: 1 = WHITE 2 = CREAM 3 = PINK 4 = LILAC 5 = PURPLE
6 = OTHER *(Specify)*_____

[2] Racemes: 1 = LONG 2 = MEDIUM 3 = SHORT [4] NUMBER FLOWERS PER RACEME

7. FRESH PODS: *(Edible maturity, averages for 10 pods)*

[2] Color: 1 = LIGHT GREEN *(Bountiful)* 2 = MEDIUM GREEN *(Tendergreen)* 3 = DARK GREEN *(Wade)*
4 = LIGHT YELLOW *(Brittlewax)* 5 = GOLDEN YELLOW *(Cherokee Wax)* 6 = GREEN-RED VARIAGATED *(Horticultural)*
7 = OTHER *(Specify)* _____

[1 5] CM. LENGTH [8 9] MM. WIDTH *(Between sutures)* [9 4] MM. THICKNESS [9 5] WIDTH / THICKNESS X 10

[4] Cross section pod shape: 1 = FLAT 2 = OVAL 3 = CREASEBACK 4 = ROUND

[2] Curvature: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

[2] Pubescence: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE

[2] Constrictions: 1 = NONE 2 = SLIGHT 3 = DEEP

[2] Spur: 1 = STRAIGHT 2 = SLIGHTLY CURVED 3 = CURVED

[2] Surface: 1 = SHINY 2 = DULL

[1] Surface: 1 = SMOOTH 2 = *BLISTERED*

[1] Pod flesh: 1 = LIGHT 2 = DARK

[1] Pod flesh: 1 = FIRM 2 = WATERY

[13] MM. SPUR LENGTH

[2] Suture string: 1 = PRESENT 2 = ABSENT

[1] Fiber: 1 = NONE 2 = SPARSE 3 = CONSIDERABLE

[1] Seed development: 1 = SLOW 2 = MEDIUM 3 = FAST

[7] NUMBER OF SEEDS PER POD

[ ] NUMBER PODS PER PLANT *(Once over harvest)*

[ ] NUMBER MARKETABLE PODS PER PLANT *(Once over harvest)*

[1] Machine harvest: 1 = ADAPTED 2 = NOT ADAPTED

8. SEED COAT COLOR:

[1] 1 = MONOCHROME 2 = POLYCHROME

[1] 1 = SHINY 2 = DULL

[1] Primary color:
[ ] Secondary color:
1 = WHITE 2 = YELLOW 3 = BUFF 4 = TAN
5 = BROWN 6 = PINK 7 = RED 8 = PURPLE
9 = BLUE 10 = BLACK 11 = OTHER *(Specify)*_____

[ ] Color pattern: 1 = SPLASHED 2 = MOTTLED 3 = STRIPED 4 = FLECKED 5 = DOTTED

[ ] Secondary color location:
1 = HILAR RING 2 = HILAR SURFACE
3 = STROPHIOLE 4 = MICROPYLE
5 = SIDES 6 = DORSAL SURFACE
7 = NOT RESTRICTED TO ANY AREA 8 = COMBINATION OF LOCATIONS *(Specify)*_____

[1] Hilar ring: 1 = NOT PRESENT 2 = NARROW 3 = BUTTERFLY SHAPED

[1] Vein-like under coat pattern: 1 = ABSENT 2 = PRESENT

9. SEED SHAPE AND SIZE:

[1] Hilum view: 1 = ELLIPTICAL 2 = OVAL 3 = ROUND

[3] Side view: 1 = OVAL 2 = ROUND 3 = KIDNEY 4 = TRUNCATE ENDS

[4] Cross section: 1 = ELLIPTICAL 2 = OVAL 3 = CORDATE 4 = ROUND

[28] GM. WEIGHT PER 100 SEEDS

[4] Classification: 1 = PEA 2 = MEDIUM 3 = MARROW 4 = KIDNEY 5 = PINTO

[0 6] MM. WIDTH *(Dorsal to ventral)*

[0 6] MM. THICKNESS *(Side to side)*

[1 3] MM. LENGTH

[1 0 0] WIDTH / THICKNESS X 10

5

10. ANTHOCYANIN: *(1 = Absent 2 = Present):*

[1] FLOWERS [1] STEMS [1] PODS [1] SEEDS [1] LEAVES

11. DISEASE RESISTANCE *(0 = Not tested; 1 = Susceptible; 2 = Resistant):*

[0]	RUST *(Specify race)* _____	[0]	ANGULAR LEAF SPOT
[0]	BACTERIAL WILT	[2]	COMMON BEAN MOSAIC
[0]	ANTHRACNOSE	[0]	YELLOW BEAN MOSAIC
[0]	SOUTHERN BEAN MOSAIC	[0]	FUSARIUM ROOT ROT
[0]	CURLY TOP	[2]	N.Y. 15 BEAN MOSAIC
[0]	POWDERY MILDEW	[0]	BEAN MOSAIC VIRUS 4
[0]	HALO BLIGHT	[0]	FUSCOUS BLIGHT
[0]	ALFALFA MOSAIC VIRUS	[0]	ALFALFA MOSAIC VIRUS 2
[0]	POD MOTTLE VIRUS	[0]	RED NODE VIRUS
[0]	ROOT KNOT NEMATODE	[0]	OTHER *(Specify)* _____

12. INSECT RESISTANCE: *(0 = Not tested; 1 = Susceptible; 2 = Resistant)*

[0]	APHIDS	[0]	LEAF HOPPERS
[0]	POD BORER	[0]	LYGUS
[0]	THRIPS	[0]	WEAVILS
[0]	SEED CORN MAGGOT	[0]	OTHER *(Specify)* _____

13. PHYSIOLOGICAL RESISTANCE: *(0 = Not tested; 1 = Susceptible; 2 = Resistant)*

[2] HEAT [0] COLD [0] DROUGHT [0] OTHER *(Specify)* _____

REFERENCES: The following publications may be used as a reference in completing this form:

1. Beans of New York. Vol. 1 Part II of Vegetables of New York. U.P. Hedrick et al. J. B. Lyon Company, Albany, N.Y. 1931.

2. Yarnell, S. H., Cytogenetics of the Vegetable Crops IV. Legumes. Bot. Rev. 31:247 - 330. 1965.

3. USDA Yearbook of Agriculture. 1937.

COLOR: Nickerson's or any recognized color fan may be used to determine the colors.

EXHIBIT C

Description Variety

Maturity: At Twin Falls, Idaho, prime harvest is achieved at about 75 days (1276 Hu), falling in the Tendercrop group.

Plant: Tendercrop type plant. Erect but more spreading than Tendercrop.

Pods: Pods are relatively slender, straight and about 5 1/2 inches in length. At prime maturity determined by seed length. Pods are fleshy with low fiber and slow seed development. Color is medium green and suitable for canning, freezing, or in the fresh stage.

Adaptation: All reports indicate a wide range of adaptation determined from trials in Oregon, California, Idaho, Wisconsin, New Jersey, Florida, Tennessee, Arkansas and New York.

Yield: Yields have been good in most trials and reports indicate that in several trials (New York, Tennessee, Arkansas) Eagle was the highest yielding entry.

This variety provides a combination of highly desirable characteristics including but not restricted to the following:

1. Slender podded white seeded Tendercrop type.
2. High yield potential being highest yielding in numerous trials.
3. Desirable processing characteristics - white seeded with slow fiber and seed development.
4. Pleasing flavor.
5. Desirable pod characteristic - straight.

EXHIBIT D

Trial Performance

The trial performance reported here is that from Twin Falls, Idaho, where four years performance data is available.

	1967	1968	1969	1970
Planting date:	5/23	5/27	5/26	5/25
Blossom date:	7/6	7/10	7/14	7/13
Harvest date:	8/4	8/4	8/11	8/7
Days to harvest:	73	69	77	74
Degree days:	1332	1348	1398	1219
Yield 1-3 sieve	2060	3330	1060	2670
4 sieve	3730	8520 ✔	4772	7360
5+ sieve	2850	2960	9940 ✔	2100
Total	8640	14810	15770	12120
10 seed length mm	111	128	125	102
W/T ratio	.90	.90	.89	.91
% fiber	.060	.120	.080	.007
% seed	10	6	15	7

DATA TO SUPPORT EXHIBIT D OF PVP APPLICATION #7141 SNAP BEAN - EAGLE

Please find four tables to show differences between Eagle, Cascade, Early Gallatin and Tenderette regarding harvest date, pod length, width/thickness ratio, sieve size and genetic seed quality. In some cases Eagle is fairly close to one or more of the above varieties in certain regards and so data has not been submitted where the varieties are similar, but only where there are rather distinct differences.

All of the data being supplied are from trials at Twin Falls, Idaho, and most from 1972 and 1973. Eagle, Early Gallatin and Cascade were all grown in multi-harvest trials in 1972 and 1973 and most of the data are from these trials. We have considered that Tenderette and Eagle are so different that we did not grow Tenderette in the multi-harvest trials and therefore we do not have the volume of data on this variety that we have on the others. However, there are some very distinct differences illustrated by the data supplied.

Early Gallatin differs from Eagle in pod length. The overall average pod length for Eagle is 153 millimeters, whereas that for Early Gallatin is 135. The measurements are from sieve size 5 pods. Early Gallatin also has a considerably larger sieve size and it will be noted from the table supplied that the overall average for Early Gallatin is 46%, 5 and over, and for Eagle 34%, 5 and over. Early Gallatin is also a darker pod in both the raw and processed stage, however, we do not have numerical data to support this. Early Gallatin also has a smaller plant. Early Gallatin in commercial production is considered to be somewhat earlier than Eagle. In 1972 at Twin Falls there was very little difference in maturity whereas in 1973 there was approximately a five day difference in favor of Early Gallatin. The harvest dates in the different tables illustrate this difference.

Eagle differs from Cascade in pod length. The overall pod length of sieve size 5 pods for Eagle was 153 millimeters and for Cascade 143. Cascade pods are more nearly perfectly round in that the width/thickness ratio for Cascade is .96 and for Eagle .92. These differences are very consistent as will be shown by an examination of the table. Cascade is also larger sieve. The overall average for Cascade was 50%, 5 and over, whereas for Eagle it was 34%. Genetic seed quality for Eagle is considerably better than that for Cascade. The overall average being 36 for Eagle and 14 for Cascade. Cascade is generally considered to be an earlier bean than Eagle but in 1972 there was relatively little difference in maturity, whereas in 1973 Cascade was approximately one week earlier than Eagle at Twin Falls. This is shown in the tables. In commercial production, Cascade is generally considered to be somewhat earlier than Eagle.

Tenderette is a completely different bean from Eagle, so different in fact, that we have relatively little data to support this statement. However, you will note that Tenderette has a very short pod as compared to Eagle. The average length of five sieve Eagle pods is 153 millimeters and of Tenderette 132. These differences are easily seen in the field and are definitely real. Tenderette is also much more creaseback than Eagle. Again the difference is easily discernible in the field and our limited data indicates an average width/thickness ratio of .88 for Tenderette and .92 for Eagle. Tenderette is also considerably larger in sieve size in that the average sieve size for Tenderette is 54%, 5 and over, as compared to 34%, 5 and over, for Eagle.

However, the difference is much greater in that if one compares the first harvest of Eagle with a similar harvest of Tenderette, the average is 16% for Eagle as compared with 54%, 5 and over, for Tenderette. In addition to the above factors, Tenderette has a somewhat darker pod in both the raw and processed state. This difference is easily discernible but we do not have numerical data. Also, Tenderette has a smaller plant and again this difference is easily discernible in the field.

May 10, 1974

JDA/vl

Comparison of Eagle, Cascade, Early Gallatin and Tenderette for harvest date and length of 5 sieve pods in MM. Each pod length figure is the average of 10 measurements.

Data are from Twin Falls, Idaho, trials.

Eagle		Early Gallatin		Cascade		Tenderette	
Harvest Date	Pod Length	Harvest Date	Pod Length	Harvest Date	Pod Length	Harvest Date	Pod Length
8/2/72	156	8/1/72	139	8/1/72	143	8/1/72	134
8/4/72	146	8/3/72	136	8/3/72	137		
8/7/72	162	8/5/72	138	8/5/72	144		
8/9/72	156	8/7/72	139	8/7/72	144		
		8/9/72	126				
Average	155		136		142		
8/11/73	153	8/6/73	136	8/4/73	144	8/10/73	130
8/13/73	156	8/8/73	136	8/6/73	144		
8/15/73	152	8/10/73	130	8/8/73	144		
8/17/73	146	8/13/73	138	8/10/73	137		
8/20/73	152	8/15/73	134	8/13/73	147		
8/22/73	155			8/15/73	142		
Average	152		135		143		
2 yr Average	153		135		143		132

May 10, 1974

JDA/vl

EXHIBIT D

Comparison of Percent Sieve Size 5 and Large Pods of Eagle, Cascade, Early Gallatin and Tenderette.

Eagle		Cascade		Early Gallatin		Tenderette	
Harvest Date	% 5 & over	Harvest Date	% 5 & over	Harvest Date	% 5 & over	Harvest Date	% 5 & over
8/2/72	16	8/1/72	46	8/1/72	45	8/1/72	53
8/4/72	24	8/3/72	47	8/3/72	43		
8/7/72	39	8/5/72	54	8/5/72	51		
8/9/72	48	8/7/72	64	8/7/72	55		
				8/9/72	57		
Average	32		53		50		
8/11/73	17	8/4/73	30	8/6/73	25	8/10/73	55
8/13/73	19	8/6/73	38	8/8/73	35		
8/15/73	33	8/8/73	45	8/10/73	43		
8/17/73	35	8/10/73	53	8/13/73	43		
8/20/73	46	8/13/73	53	8/15/73	65		
8/22/73	62	8/15/73	69				
Average	35		48		42		
2 yr Average	34		50		46		54

May 10, 1974

JDA/vl

EXHIBIT D

Comparison of seed quality of Eagle and Cascade. Theoretically the rating could go from zero to 100. Genetically perfect seed would have a rating of 100 and a variety with genetically poor seed quality would have a lower rating. The ratings are the results of objective tests.

	Eagle	Cascade
1971	31	12
	47	3
	51	---
Average	43	8
1972 Rep A	38	27
B	19	14
C	35	23
D	38	17
E	51	35
Average	36	23
1973 Rep A	24	5
B	26	7
C	64	5
D	32	9
E	7	7
Average	31	7
3 yr. Average	36	14

May 10, 1974

JDA/vl

Comparison of Width/Thickness Ratio of Bean Pods of Eagle, Cascade and Tenderette

Eagle		Cascade		Tenderette	
Harvest Date	W/T Ratio	Harvest Date	W/T Ratio	Harvest Date	W/T Ratio
8/2/72	.95	8/1/72	1.00	8/1/72	.89
8/4/72	.93	8/3/72	.97		
8/7/72	.92	8/5/72	.95		
8/9/72	.88	8/7/72	.93		
Average	.92		.96		
8/11/73	.91	8/4/73	.97	8/10/73	.88
8/13/73	.94	8/6/73	1.00		
8/15/73	.90	8/8/73	.94		
8/17/73	.92	8/10/73	.98		
8/20/73	.90	8/13/73	.95		
8/22/73	.90	8/15/73	.95		
Average	.91		.96		
2 yr Average	.92		.96		.88

May 10, 1974

JDA/vl

Exhibit D Data Indicative of Novelty

Bean Eagle PV#7141

Eagle is best described as a slender podded Tendercrop type since it approximates most Tendercrop varieties in maturity. It is low in fiber and slow in seed development and flesh holds well for a long period. It produces high yields and a high pod count per plant and produces comparatively high yields in the 4 and under sieve range. It can best be compared to Early Gallatin (Gallatin 50), Cascade and Tenderette since these are all derivatives of the dark seeded Tendercrop.

Eagle compared to Early Gallatin

Eagle produces longer pods: 15.0 cm vs 13.5 cm.
Eagle pod color is lighter green.
Eagle pod size is smaller. At 10.0-11.0 mm seed length Eagle will average about 35% 5 sieve and over while Early Gallatin will average about 50% 5 sieve and over.
Eagle produces a taller plant than Early Gallatin.
Eagle is usually 1-2 days later in maturity.

Eagle compared to Cascade

Pod length is approximately equal but Eagle pods are straighter.
Eagle pod color is much lighter than Cascade.
Eagle is more slender-podded. Cascade equals Early Gallatin in pod size.

Eagle compared to Tenderette

Tenderette approximates Early Gallatin and Cascade and Eagle differs from Tenderette in the same respects producing lighter colored, more slender pods.

EXHIBIT E

Basis of Ownership

Eagle was developed by Dr. W. H. Pierce, retired, a former employee of Asgrow Seed Company and Dr. C. G. Briggs, a current Asgrow employee. By agreement between the employee and Asgrow Seed Company all rights to any invention, discovery, or development made by the employee, while employed by Asgrow Seed Company, were assigned to Asgrow Seed Company with no rights of any kind retained by the employee.